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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------------|--------------------------|------------------|
| 09/703,074 | 10/31/2000 | Jose J. Garcia-Luna-Aceves | 59643.00244 | 1256 |
| 32294 | 7590 | 11/13/2006 | | |
| SQUIRE, SANDERS & DEMPSEY L.L.P. 14TH FLOOR 8000 TOWERS CRESCENT TYSONS CORNER, VA 22182 | | | EXAMINER DUONG, DUC T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2616 | |

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 09/703,074 | Applicant(s) GARCIA-LUNA-ACEVES ET AL. | |
| | Examiner Duc T. Duong | Art Unit 2616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-17,20-23,26-37 and 40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3,6-13,20-23,26-33 and 40 is/are allowed.
- 6) ☒ Claim(s) 14-17 and 34-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 14-17 and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Francis in view of Li (U.S. Patent 6,795,433 B1).

Regarding to claims 14 and 34, Francis discloses an apparatus (Fig. 1) for forwarding multicast packets in a network comprising a plurality of routers r101-120 in a multicast group, wherein each of the plurality of routers reports routing tree information (join request) to other routers of said plurality of routers, said apparatus comprising a first router r102 (Fig. 6 col. 8 lines 34-36), said first router including a multicast forward cache 102-50 (Fig. 8 col. 8 lines 45-48), said first router, further for receiving a multicast packet from a second router r101 in a network (Fig. 6 col. 8 lines 31-33), said multicast packet from a selected source s101 and for a selected multicast group (Fig. 6 col. 8 lines 1-4), determining, based at least in part, on said control information (multicast address) and the routing tree information (join request) reported by said second router (Fig. 6 col. 8 lines 8-10), if said multicast packet is to be forwarded by said first router (Fig. 6 col. 8 lines 42-43), and wherein said first router, in response to a positive determination that said multicast packet is to be forwarded, forwards said multicast packet to at least a third router r104 (Fig. 6 col. 8 lines 45-48) and wherein said first

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router creates an entry 102-51 indicating that a multicast packet from said selected source and said selected multicast group should be forwarded after making a positive determination that said multicast packet is to be forwarded (Fig. 8 col. 8 lines 45-48).

Francis fails to teach for the multicast packet-forwarding cache includes an entry indicating each multicast packet recently forwarded by said second router.

However, Li discloses a system and method of processing a multicast packet, wherein routers maintaining forwarding cache with entry for multicast packet recently forwarded (fig. 9-10 col. 5 lines 18-64)

Thus, to arrange for such cache to maintain the most recently forwarded multicast packet would have been obvious to a person of ordinary skill in the art such arrangement is a well known conventional technique in the operation of cache for quick retrieval or fast access to the system data.

Regarding to claims 15 and 35, Francis discloses the multicast packet includes an address of the multicast group (col. 8 lines 5-10).

Regarding to claims 16 and 36, Francis discloses the multicast packet includes an address of the source of said multicast packet (col. 3 lines 60-63).

3. Claims 17 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Francis in view of Akahane et al (U.S. Patent 6,778,532 B1).

Regarding to claims 17 and 37, Francis discloses all the limitations with respect to claims 14 and 34, except the multicast packet includes a time value, wherein said time value is used to limit the time said multicast packet is allowed to remain in the system. However, Akahane discloses a system for multicasting packet, wherein the

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packet includes a packet life-time field (Fig. 3c). Thus, it would have been obvious to a person of ordinary skill in the art to employ a time value in a packet to limit the time said multicast packet is allowed to remain in the system for the purpose of preventing unwanted packets build-up that could cause network congestion.

Response to Arguments

4. Applicant's arguments filed August 1, 2006 have been fully considered but they are not persuasive. Regarding to applicant's argument on pages 19-20 requesting evidence teaching of "wherein said second router maintains a multicast packet-forwarding cache, and wherein said multicast packet-forwarding cache includes an entry indicating each multicast packet recently forwarded by said second router" is obvious. In response, examiner would like to direct applicant's attention to US Patent 6,795,433 B1, herein Li discloses a system and method of processing a multicast packet, wherein routers maintaining forwarding cache with entry for multicast packet recently forwarded (fig. 9-10 col. 5 lines 18-64). Thus, based on the reasons set forth here the rejections are maintained.

Allowable Subject Matter

5. Claims 1-3, 6-13, 20-23, 26-33, and 40 are allowed.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Duong whose telephone number is 571-272-3122. The examiner can normally be reached on M-F (9:00 AM-6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D. Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

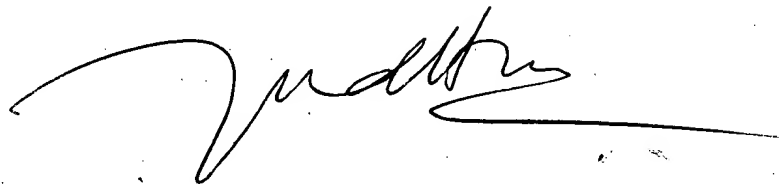
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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to read 'Huy D. Vu', with a long horizontal flourish extending to the right.

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600